

Technical design note

Project name	McDonald's Pontardawe		
Design note title	Neath Port Talbot County Borough Council - Highways Briefing Note		
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1. Introduction

1.1 Aim of Note

- 1.1.1 This Transport Note (TN) has been prepared by Hydrock on behalf of McDonalds Restaurants Ltd to summarise the highways and transport position in relation to planning application P2023/0101 (PP-11913031). The application seeks permission for the erection of a freestanding drive-thru/restaurant, car parking, landscaping, and associated works, including Customer Order Displays (COD) and play frame.

2. Site Layout and Sustainable Transport

- 2.1.1 The internal site layout has been updated and amended following discussions with NPT officers in order to ensure that it complies with active [Travel Act Guidance](#) in terms of accessibility and provision for active travel. This includes a full review of:
- » path widths
 - » crossing provision
 - » cycle storage
 - » accessible parking layout
 - » ramp widths and gradients
- 2.1.2 Agreement has been reached with NPT officers that the revised layout meets the appropriate guidance and is considered acceptable.

3. Deliveries

- 3.1.1 All refuse collection and most deliveries will take place from within the restaurant car park, with spaces cordoned off as required for the vehicle (up to a 10m rigid). Larger vehicles may be required on a less-frequent basis (including articulated lorries). When these visit, they will use the redundant bus layby directly outside the site. This will be governed by a Service Management Plan and an amended Traffic Regulation Order (TRO) for the former bus layby.

4. Highways Impact

- 4.1.1 The highway around the development site was originally designed to cater for the traffic associated with a busy supermarket with a full car park. The Tesco car park has historically been underused, and part of it will now be redeveloped to create the McDonalds. This means that there is some spare highways capacity to accommodate the new restaurant. In addition, a significant proportion of visits to the restaurant would be linked to existing trips (e.g. picking up some food on the way back from an existing shopping trip), so would not be additional trips on the network.
- 4.1.2 'Traditional' highways modelling software (such as Arcady and Picady) is based on mathematical relationships between highway geometry, traffic flow, and capacity derived from large scale surveys of existing junctions. They are not designed to replicate closely-spaced junctions and more complex layouts.
- 4.1.3 As a result, more detailed 'microsimulation' software has been used (PTV Vissim). This explicitly represents individual vehicles and the behaviour of their drivers. The models also include a certain element of random variation to represent daily fluctuations in traffic movements and are run repeatedly to obtain statistically valid results in terms of journey times and queue lengths.
- 4.1.4 The model covers the whole area from the roundabout outside the Tesco car park, the A4067 roundabout and A474 roundabout. Modelling was carried out for the morning and evening peaks, as well as a Saturday lunch time peak.

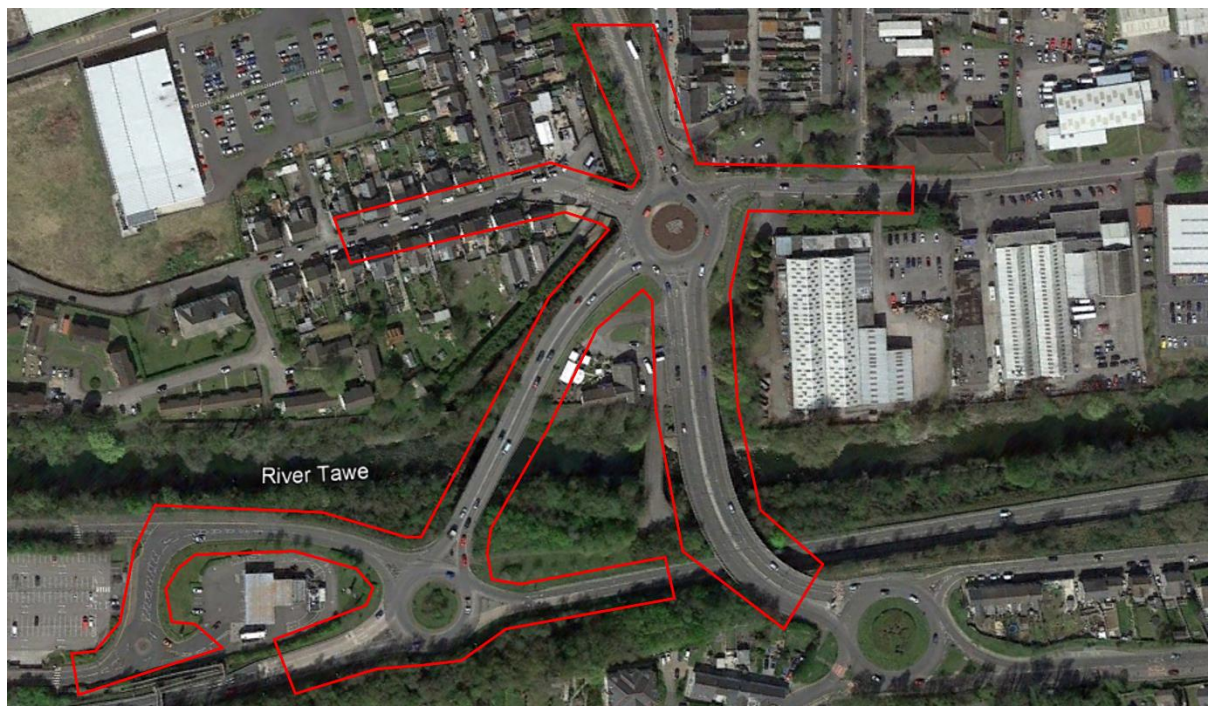


Figure 4.1: Model Area

4.2 Journey times

- 4.2.1 Average journey times were gathered for a total of 20 routes through the model area. They were compared with and without the McDonalds visitors. The following increases were observed:
- » AM Peak: 0 to 13 seconds depending on route, with an average increase of 5 seconds
 - » PM Peak: 0 to 4 seconds across all routes, with an average increase of 1 seconds
 - » Saturday Midday Peak: 0 to 9 seconds across all routes, with an average increase of 3 seconds
- 4.2.2 The highest increase in journey time was observed to occur in the morning peak, travelling from the A4067 (S) to A474 (W) (i.e. through both main roundabouts). This saw an increase from 1 minute 44 seconds to 1 minute 57 seconds - a 13 second increase.
- 4.2.3 These increases are minor and unlikely to be noticed by most road users.

4.3 Queue Lengths

- 4.3.1 Mean maximum queue lengths (in meters) were recorded for the all junction approaches. As above, they were compared with and without the McDonalds visitors. The following increases were observed:
- » AM Peak: 0 to 9 meters depending on approach, with an average increase of 1.9 meters
 - » AM Peak: 0 to 3 meters depending on approach, with an average increase of 0.8 meters
 - » AM Peak: 0 to 3 meters depending on approach, with an average increase of 0.9 meters
- 4.3.2 These average increases are all less than one car in length, and unlikely to be noticeable to road users. The largest increase in queue length observed was on the A4067 south (9 meters), equivalent to less than 2 car lengths. Again, this is minor and unlikely to be noticed by road users.

5. Summary

- 5.1.1 In summary, the modelling work identified that the impact of the development would be minimal and that there would be no significant adverse effects on the operation of the local highway network.